

# Rare Presentation of Florid Vulva Warts – A Case Report and Review of Literature

*Michael KC<sup>1</sup>, Musa J<sup>1</sup>, Aboki D<sup>1</sup>, Evule N<sup>1</sup>, Simon R<sup>1</sup>, Sagay E<sup>1</sup>, Akpa E<sup>1</sup>, Ameh J<sup>1</sup>*

Department of Obstetrics and Gynaecology, Jos University Teaching Hospital, Plateau state, Nigeria

*\*Correspondence Author: Dr Michael K.C. Department of Obstetrics and Gynaecology, Jos University Teaching Hospital, Plateau state, Nigeria. Email: kaceyoha@gmail.com*

## ABSTRACT

**Background:** Condyloma acuminata is an extremely common cutaneous sexually transmitted disease often diagnosed clinically, on the basis of its warty, cauliflower, and verrucous appearance. It is caused by the “low risk” Human papillomavirus types 6 and 11 in 90 percent of cases. The immune system plays a critical role in determining the course of viral infection, with immune-suppression and advanced age increasing the risk for long term wart persistence. Treatment options include the use of a wide variety of topical medications as well as surgical excision by cauterisation.

**Patient:** A rare case of florid vulvar warts in a 21-year old nulliparous immuno-competent woman is presented and the literature reviewed. She had a 7-month history of progressive vulva swelling with associated itching, contact bleeding, and malodorous discharge. It measured about 14 x 10 cm in dimensions, occupying the posterior two-thirds of the labia majora and minora and obliterating the posterior commissure.

**Intervention:** There was no positive response to Podophyllin application, however, it was eventually excised and histologic analysis excluded malignancy.

**Conclusion:** Florid vulvar warts though rare in immune-competent patients, could occur. Patients with persistent and recurrent infection often require surgical procedures as was performed in our patient with the possibility of speedy recovery and restoration of normal anatomy and cosmesis.

**Keywords:** Florid vulvar warts, Human papilloma virus, Immunocompetent, Surgical excision, Case report.

## Introduction

Genital warts are a cutaneous manifestation of the epidermotropic human papilloma virus (HPV)<sup>1</sup> which has been divided into two general categories; the low risk benign HPV lesions and the high risk neoplastic HPV lesions.<sup>1</sup> The low risk types are implicated in genital warts, recurrent respiratory papillomatosis and low-grade cervical lesions, types 6 and 11 being the most often isolated strains.<sup>1,2</sup> They are, however, rarely associated with invasive squamous cell carcinoma of the external genitalia.<sup>3</sup>

The prevalence of genital human papillomavirus infection in sub-Saharan Africa is considered to be among the highest in the world and a pooled analysis on HPV prevalence surveys revealed that the highest HPV prevalence was seen in Nigeria.<sup>4,5</sup> The overall prevalence of high risk cervical HPV amongst women with normal cytology as obtained from the Human papillomavirus and related diseases report in Nigeria is 3.5%,<sup>6</sup> although, a study conducted in Lagos University Teaching Hospital revealed that 36.5% of women attending gynaecology

clinics in the facility were positive for high risk HPV.<sup>7</sup> Prevalence obtained from similar studies ranged from 9% in Jos,<sup>8</sup> 10% in Port Harcourt,<sup>9</sup> 26.3% in Ibadan,<sup>10</sup> and 37% in Abuja.<sup>11</sup> A study by Musa et al. in Jos, Nigeria, revealed a prevalence of 44.9% for high risk HPV among HIV positive women with normal cytology.<sup>12</sup>

Aside its predilection for persons of reproductive age, Human papilloma virus infections are notorious for their persistence and recurrence in individuals with chronic immune-suppression such as people living with HIV and AIDS, recipients of renal allograft, patients on prolonged steroid therapy, debilitating illness, or even pregnancy.<sup>13-16</sup> This fastidious virus, the prevalence of which has increased four-fold in the last two decades, is often aggravated by disease states in which cell-mediated immunity is suppressed.<sup>17</sup> The risk of infection is said to be inversely associated with CD4 cell count, HIV positive women being particularly at risk.<sup>17-19</sup>

Here we have described a case of florid vulvar warts in an immunocompetent woman.

### **Patient**

A 21-year old heterosexual nullipara lady presented to the gynaecology clinic of our hospital on the 7<sup>th</sup> of July, 2021 with a 7-months history of progressively increasing vulval tumour. There was associated itching and malodorous vaginal discharge. She was HIV negative and had no history suggestive of other sexually transmitted diseases or immunosuppressive disease. She was seen earlier at another hospital where she was placed on Podophyllin ointment without improvement.

Examination revealed a young woman, not ill looking, with a pulse rate of 94 beats/minute, blood pressure of 100/70 mmHg. She had extensive cauliflower-like masses, diffused, involving the labia majora, posterior commissure, lateral aspects of the labia minora, and the introitus, with irregular borders. Colour was same as that of the adjoining skin. The growth measured about 14 x 10 cm. There was no propagation into the anal canal or into the vagina. There was no significant peripheral lymphadenopathy.

An assessment of florid vulval warts was made. The patient's packed cell volume was 40%, total white blood cell count –  $6.0 \times 10^9/L$ , Retroviral screening and Venereal Disease Research Laboratory test were non-reactive. Liver function tests, urea, electrolytes, and creatinine were within normal limits. Biopsy of the lesion confirmed condyloma acuminata.

She was admitted, counselled, and prepared for vulval warts excision and cauterisation.

Intra-operative findings were florid vulval warty growths, measuring about 14 x 10 cm, involving both labia majora, lateral aspects of the labia minora, the posterior fourchette, and obliterating the introitus.

The warty projections were excised and their bases cauterised using diathermy. Hemostasis was ensured, vulval lavage was done, and the wound dressed with sufratule. Post operatively, she had antibiotic therapy with Ceftriaxone and Metronidazole and she also had intramuscular Pentazocine for analgesia. She made remarkable recovery and was discharged 6 days postop. Subsequent follow up at the gynaecology clinic revealed a satisfactorily healed vulva with only minute areas of recurring warty growths. She commenced application of

Podophyllin and within 3 weeks there were no more visible lesions. The histology result revealed vulval tissue with fibrovascular cores lined by keratinized

stratified squamous epithelium exhibiting hyperkeratosis, parakeratosis, koilocytosis and acanthosis. There was no evidence of malignancy.



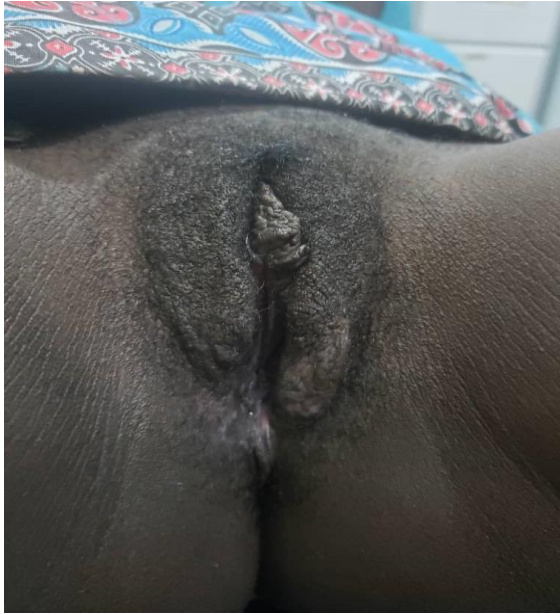
***Figure 1: Florid Vulva Warts before Surgery***



***Figure 2: Florid vulval warts with narrowed introitus before Surgery***



***Figure 3: Second day post op***



**Figure 4: Three (3) months post op**

### **Discussion**

Condylomata acuminata, also known as anogenital warts represents a form of sexually transmitted disease caused by Human papilloma virus, arising more frequently in the vulvar and perianal regions as exophytic cauliflower-like masses causing symptoms such as itching, burning sensation, discomfort, pain, or bleeding during intercourse.<sup>2,13,20</sup> Risk factors include high number of sexual partners, men who have sex with men (MSM), a history of sexually transmitted infections, smoking, the use of oral contraceptives, high parity, and immunosuppression.<sup>21-23</sup> The recurrence and stigma associated with genital warts often have psychological ramifications, with feelings of shame, worry, fear, anger, and lowered self-esteem recorded amongst patients.<sup>1,2,24</sup> Itching was the predominant symptom in the case presented and the patient admitted to feeling shame and low self-esteem.

Several studies have shown that condyloma increases by expansion and  
*Jos Journal of Medicine, Volume 16, No. 2, 1-7*

autoinoculation of the virus into distant sites rather than by infiltration.<sup>13,25</sup> The clinical appearance of warts is variable and depends to some extent on the type of HPV involved and the anatomical site.<sup>2,24</sup> Genital warts could present as smooth or flat or keratotic warts. However, they more often appear hyperplastic, sessile or pedunculated, red or pink, sometimes forming soft exuberant masses, strangulated at their bases (Condylomata acuminata).<sup>25,26</sup> Large condyloma acuminata have rich blood supply and mild trauma on the surface may lead to severe bleeding that may be unresponsive to the routine methods of achieving hemostasis, such as pressure, ligation, or electric coagulation.<sup>2</sup> Biopsy, viral typing, acetowhite staining, and other diagnostic measures are not routinely required as the diagnosis of genital warts is primarily clinical.<sup>3,27</sup>

While genital warts can eventually resolve without treatment in an immune-competent host, the infection appears to be more common and worse in patients with

various types of immunologic deficiencies.<sup>1,25,28</sup> Recurrence rate, size, discomfort, and risk of oncologic progression are highest among these patients.<sup>1</sup> The case presented was a rare situation where an immune-competent host developed symptomatic, florid and progressively worsening genital warts.

The goal of treatment is clearance of visible warts and amelioration of symptoms if present; some evidence suggests that treatment reduces infectivity, but there is no evidence that treatment reduces the incidence of cervical and genital cancer.<sup>3</sup> There are many therapeutic options, but none so far are superior to the others. The choice of treatment depends on the number, size, site, and morphology of lesions, as well as patient preferences, cost, convenience, adverse effects and clinicians experience.<sup>3</sup> Patient applied therapy such as Imiquimod cream or Podophyllin is increasingly recommended,<sup>3</sup> however, the use of Podophyllin, which is anti-mitotic in its action<sup>2</sup> in the case presented failed to yield desired results at the outset. Other treatment options such as cryotherapy, electro-desiccation, surgical excision, and carbon dioxide laser treatment may be employed with surgical excision having the highest success rate and lowest recurrence rate.<sup>1</sup> Surgical excision could be via tangential scissor excision, tangential shave excision, curettage, laser, or electrosurgery.<sup>27</sup> Likely complications of treatment include persistent hypopigmentation or hyper-pigmentation, depressed or hypertrophic scars or chronic pain syndromes (vulvodynia and hyperesthesia).<sup>27</sup> These were, however, not found in the patient.

## Conclusion

Although genital warts can be treated with medications and surgery, they are serious public health concern as human papillomavirus has been associated with cervical cancer and other types of genital cancers.<sup>8,16,24</sup> Adequate treatment of patients is required to ameliorate symptoms and to prevent progression of the disease. Florid vulvar warts though rare in immune-competent patients, could occur. Patients with persistent and recurrent infection often require surgical procedures as was performed in our patient with the possibility of speedy recovery and restoration of normal anatomy and cosmesis.<sup>17</sup>

## REFERENCES

1. Ghadishah D, James DW, Bowman JG. Genital Warts. Accessed online from: <https://emedicine.medscape.com/article/763014-overview#a4> on October 23rd, 2021.
2. Batista CS, Atallah AN, Saconato H, da Silva EMK. 5-FU for genital warts in non-immunocompromised individuals. *Cochrane Database Syst Rev.* 2010;4:(CD006562)
3. Charles MK, Soraya N. Management of Genital Warts. *Am Fam Physician.* 2004;70(12):2335-2342.
4. Clifford GM, Gallus S, Herrero R, Muñoz N, Snijders PJ, Vaccarella S, et.al; IARC HPV Prevalence Surveys Study Group. Worldwide distribution of human papillomavirus types in cytologically normal women in the International Agency for Research on Cancer HPV prevalence surveys: a pooled analysis. *Lancet.* 2005 Sep 17-23;366(9490):991-998.

5. Oboma YI, Avwioro GO. Prevalence of cervical human papillomavirus infection among women in Bayelsa state, Nigeria. *Cont J Biomed Sci.* 2012;6(1):1-3.
6. Bruni L, Albero G, Serrano B, Mena M, Collado JJ, Gómez D, et al. ICO/IARC Information Centre on HPV and Cancer (HPV Information Centre). Human Papillomavirus and Related Diseases in Nigeria. Summary Report 22 October 2021.
7. Okunade KS, Nwogu CM, Oluwole, AA, Anorlu, RI. Prevalence and Risk factors for genital high-risk human papillomavirus infection among women attending the out-patient clinics of a university teaching hospital in Lagos, Nigeria. *PAMJ One Health.* 2017;28:227.
8. Onwuliri FC, Ndako JA, Onwuliri EA, Vem TS. Studies on the prevalence of human papillomavirus (HPV) among HIV seropositive women. *J Antivir Antiretrovir.* 2017;9(3):52-53.
9. Kennedy NT, Ikechukwu D, Goddy B. Risk factors and distribution of oncogenic strains of Human papilloma virus in women presenting for cervical cancer screening in Port Harcourt, Nigeria. *Pan Afr Med J.* 2016;23:85.
10. Thomas JO, Herrero R, Omigbodun AA, Ojemakinde K, Ajayi IO, Fawole A, et al. Prevalence of papillomavirus infection in women in Ibadan, Nigeria: a population-based study. *Br J Cancer.* 2004 Feb 9;90(3):638-45.
11. Akarolo-Anthony SN, Famooto AO, Dareng EO, Olaniyan OB, Offiong R, Wheeler CM, et al. Age-specific prevalence of human papillomavirus infection among Nigerian women. *BMC Public Health.* 2014 Jun 27;14(1):656.
12. Musa J, Taiwo B, Achenbach C, Olugbenga S, Berzins B, Sagay AS, et al. High-risk human papillomavirus among HIV-infected women with normal cervical cytology: a pilot study in Jos, Nigeria. *Arch Gynecol Obstet.* 2013 Dec;288(6):1365-1370.
13. Yakasai IA, Abubakar IS, Ibrahim SA, Ayyuba R. Unusual Presentation of Giant Condylomata Acuminata of the Vulva- A case Report and Review of Literature. *Anat Physiol.* 2012;86:1-3.
14. Wieland U, Kreuter A, Pfister H. Human Papillomavirus and Immunosuppression. *Curr Probl Dermatol.* 2014;45:154-165.
15. Leigh IM, Glover MT. Cutaneous warts and tumours in immunosuppressed patients. *J R Soc Med.* 1996;88:61-62.
16. Larsen HK, Thomsen LT, Haedersdal M, Dehlendorff C, Sorensen SS, Kjaer SK. Risk of genital warts in renal transplant recipients – a registry-based prospective cohort study. *Am J Transplant.* 2018;19(1):156-165.
17. Mahanti S, Chaudhari HK. Florid Genital Warts in Pregnancy. *JPGO.* 2019;6(6)
18. Liu G, Sharma M, Tan N, Barnabas RV. HIV-positive women have higher risk of human papilloma virus infection, precancerous lesions, and cervical cancer. *AIDS.* 2018 Mar 27;32(6):795-808.
19. Fayemiwo SA, Adesina OA, Akinyemi JO, Michael OS, Adekambi OA, Awolude OA, et al. External genital warts in HIV-infected patients with sexually transmitted infections in Ibadan, Nigeria. *Afr. J. Med. Med. Sci.* 2017;46:473-480.
20. Luca G, Roberto C, Roberta B, Franco R, Giuseppe N, Cesare B, et

- al. A case report of Giant genital warts. *J Sienna Acad Sci.* 2014;6:13-15.
21. Nowak RG, Gravitt PE, He X, Ketende S, Dauda W, Omuh H, et al. TRUST Study Group. Prevalence of Anal High-Risk Human Papillomavirus Infections Among HIV-Positive and HIV-Negative Men Who Have Sex with Men in Nigeria. *Sex Transm Dis.* 2016 Apr;43(4):243-8.
  22. Dhumale SB, Sharma S, Gulbake A. Ano-Genital Warts and HIV Status- A Clinical Study. *J Clin Diagn Res.* 2017 Jan;11(1):WC01-WC04.
  23. Dare AA, Daniel G, Samuel AE, Winna F, Jacob OR. Incidence and Predictors of Premalignant cervical lesions among women in Jos University teaching hospital, plateau state, Nigeria. *Afr J Midwifery Womens Health.* 2016;10(3):138-144.
  24. Batista CS, Atallah AN, Saconato H, da Silva EM. 5-FU for genital warts in non-immunocompromised individuals. *Cochrane Database Syst Rev.* 2010 Apr 14;2010(4):CD006562.
  25. Nwokedi EE, Ochicha O, Mohammed AZ. Florid Anogenital Condyloma Acuminata in a Male African: A Case Report. *Afr J Clin Exper Microbiol.* 2006;7(2):139-142.
  26. Dareng EO, Adebamowo SN, Famooto A, Olawande O, Odutola MK, Olaniyan Y, et al. Prevalence and incidence of genital warts and cervical Human Papillomavirus infections in Nigerian women. *BMC Infect Dis.* 2019;19(27).
  27. Centers for Disease Control and Prevention. Anogenital Warts. Sexually Transmitted Infections treatment Guidelines, 2021. Accessed online on the 23<sup>rd</sup> of October, 2021 from: <https://www.cdc.gov/std/treatment-guidelines/anogenital-warts.htm>
  28. Hum M, Chow E, Schuurmans N, Dytoc M. Case of giant vulvar condyloma acuminata successfully treated with imiquimod 3.75% cream: A case report. *SAGE Open Med Case Rep.* 2018 Oct 10;6:2050313X18802143.